

Title (en)  
Generating and processing of CDMA signals

Title (de)  
Erzeugung und Verarbeitung von CDMA-Signalen

Title (fr)  
Génération et traitement de signaux AMRC

Publication  
**EP 2701323 B1 20150325 (EN)**

Application  
**EP 12006039 A 20120824**

Priority  
EP 12006039 A 20120824

Abstract (en)  
[origin: EP2701323A1] The invention relates to a method for generating a CDMA signal  $s(t)$  comprising  $N$  components, by assigning to each of the  $N$  components one unique spreading sequence  $a_n$  and modulating the symbols  $d_n$  of each component on the assigned unique spreading sequence  $a_n$  (S10), and combining the  $N$  symbols  $d_n$  each being spread to a CDMA signal  $s(t)$  (S12), wherein the assigned spreading sequences  $a_n$  are selected such that all selected pairs within the set of  $N$  spreading sequences are orthogonal or very close to be orthogonal. A constraint on the transmitted symbols defines that the symbols of the components are selected to fulfill a predefined condition, for example that the product of all symbols for each time instance is a constant value over a certain period of time assuming that all modulated components have the same symbol duration. For example, if binary symbols with values  $+1$  or  $-1$  are used, the constraint may define that the product of all symbols for each time instance is either  $+1$  or  $-1$ , per convention, over a certain period of time. The invention also relates to a corresponding receiver. Application to GNSS, especially Galileo.

IPC 8 full level  
**H04J 13/00** (2011.01); **H04B 1/7103** (2011.01); **H04J 13/18** (2011.01)

CPC (source: EP US)  
**G01S 19/02** (2013.01 - EP US); **H04B 1/7103** (2013.01 - US); **H04J 13/0003** (2013.01 - EP US); **H04J 13/18** (2013.01 - EP US);  
**H04J 13/004** (2013.01 - EP US)

Cited by  
CN107124382A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2701323 A1 20140226; EP 2701323 B1 20150325**; CN 103634065 A 20140312; CN 103634065 B 20180126; ES 2539362 T3 20150630;  
US 2014056332 A1 20140227; US 8971383 B2 20150303

DOCDB simple family (application)  
**EP 12006039 A 20120824**; CN 201310385787 A 20130823; ES 12006039 T 20120824; US 201313974940 A 20130823